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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,882	04/12/2004	Moo Hwan Kim	KIMM3007/EM	2491
23364	7590	05/12/2005	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			VERBITSKY, GAIL KAPLAN	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/821,882

Applicant(s)

KIM ET AL.

Examiner

Gail Verbitsky

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 31-14 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 10-14 is/are rejected.
- 7) ☒ Claim(s) 4-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1, 3-6, 10, 13 are objected to because of the following informalities:
  - A) Perhaps applicant should replace "heating elements" in line 7 of claim 1, line 3 of claim 3, line 3 of claim 6, line 5 of claim 8, lines 8 and 13 of claim 10, line 2 of claim 13 with –heating elements--.
  - B) Perhaps applicant should replace "second vessel" in lines 9 and 16 of claim 4 with –second vessels--,
  - C) Perhaps applicant should replace "second duct" in line 13 of claim 4 and line 2 of claim 5 with –second ducts--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 10-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this case, the claim language is confusing because the preamble of the claim 10 is directed to a method for measuring heat dissipation while there are no steps leading to measuring of the dissipation have been described in the body of the claims.
4. Claims 11-13 are rejected by virtue of their dependency on claim 10.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill (U.S. 5672289).

O'Neill discloses in Fig. 1 a device for measuring heat from a heater and controlling a heater, the device comprising a reference heating element/ heater 22 and a sample/ target heating element/ heater 24 which are having size and outer configuration substantially identical to each other, as shown in Fig. 1. The device comprises a heater control unit 42, a pair of temperature sensors 10, 12 measuring temperature of a sample and a reference sample respectively, which temperatures are representative of heat flow from the sample heater and the reference heater respectively, and thus, in a broad sense, it is considered, that it is representative of the sample heater and the reference heater.

The control unit 42 controls the reference heater (and the sample heater) such that the difference (error) of temperatures obtained by the reference temperature sensor (representative the reference heater) 12 and the sample temperature sensor (representative the sample heater) 10 is minimized (becomes substantially identical) (col. 2, lines 55-67 and entire col. 3).

For claim 2: the reference heating element 22 is an electrical heating element (resistance) and thus, provided with an electrical heater (heat source).

For claim 3: in response to the control unit that compares the temperatures, the power is being supplied by the control unit to the sample heater and the reference heater so as to eliminate said temperature difference/ error and thus, to make the temperatures substantially equal to each other (col. 3, lines 8-18).

With respect to the preamble of claims: the preamble of the claims does not provide enough patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and a portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. Kropa v. Robie, 88 USPQ 478 (CCPA 1951).

7. Claims 1-3, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schawe et al. (U.S. 6170984) [hereinafter Schawe].

Schawe discloses in Fig. 1 a device for measuring heat from a heater and controlling a heater, the device comprising a reference heating element/ heater 50 and a sample/ target heating element/ heater 48 which are having size and outer configuration substantially identical, as shown in Fig. 1. The device comprises a heater control unit (temperature programmer) 60, a pair of temperature sensors 44, 54 measuring temperature of a sample and a reference sample respectively, which temperatures are representative of heat flow from the sample heater and the reference heater respectively, and thus, in a broad sense, it is considered, that it is representative of the sample heater and the reference heater.

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The control unit 60 controls the reference heater (and the sample heater) such that the difference of temperatures obtained by the reference temperature sensor (representative the reference heater) 50 and the sample temperature sensor (representative the sample heater) 48 becomes negligible (becomes substantially identical) (entire col. 9).

For claim 2: the reference heating element 50 is an electrical heating element (resistance) and thus, provided with an electrical heater (heat source).

For claim 3: in response to the control unit that compares the temperatures, when there is a difference between the temperatures, the differential power increment is fed to the sample heater 48 and the reference heater 50 to correct the temperature difference (col. 4, lines 58-67).

With respect to the preamble of claims: the preamble of the claims does not provide enough patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and a portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. Kropa v. Robie, 88 USPQ 478 (CCPA 1951).

#### ***Allowable Subject Matter***

8. Claims 4-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 10-13 would be allowable if rewritten or

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amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

**Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication should be directed to the Examiner Verbitsky who can be reached at (571) 272-2253 Monday through Friday 8:00 to 4:00 ET.

GKV

Gail Verbitsky

Primary Patent Examiner, TC 2800



May 10, 2005